Creating a note classification scheme for a multi-institutional electronic medical record

Thomas H. Payne, MD, Barak Gaster, MD, Durline Mineer, Jim Mazurk, Nancy Dunnington, RHIA, Jacquie Zehner, RHIT, Bill Lober, MD, Erik Van Eaton, MD, Wayne McCormick, MD
UW Medicine, University of Washington, Seattle, Washington

ABSTRACT
How notes are categorized in an electronic medical record (EMR) influences how rapidly users can locate documents and enter new ones, whether algorithmic search for chart deficiencies is possible, and the ease of incorporating collections of existing notes. We balanced these competing needs when developing a note classification scheme for the Online Record of Clinical Activity (ORCA) electronic medical record at the University of Washington.

BACKGROUND
The ORCA project will provide an EMR to be used at Harborview Medical Center (HMC), University of Washington Medical Center, Seattle Cancer Care Alliance, and associated clinics based on vendor software (Cerner Millennium). To prepare for this project a multidisciplinary workgroup chaired by one of us (WMcC) developed a scheme to classify all ORCA documents, including both imported documents and those created within the software application. Documents to be incorporated into the ORCA record are derived from 4 sources: transcribed documents stored in a vendor (Intellus Eclipsys) repository, documents previously entered in our web-based EMR, over 50 million scanned document images, and documents to be entered prospectively into ORCA.

OBJECTIVES
Our goals in developing a note classification scheme included:

- Provide sufficient granularity to permit users to quickly find documents of interest for both inpatient and outpatient care
- Take advantage of the vendor's display metaphor (nested folders [see Figure], multiple axes [type, status, date, author]) to display document lists.
- Include HMC scanned document collection
- Facilitate automatic notification of chart deficiencies, using required document titles
- Simplicity for users in selecting titles for documents entered though dictation or templates
- If possible, adopt standards to permit document exchange with foreign medical record systems

NOTE CLASSIFICATION SCHEME CHOSEN
The main features of the note classification scheme to be used at first production use of ORCA are:

- 28 high level title groupings displayed as folders
- 465 document titles for past and current notes 364 can be used for prospective document entry
- More detailed note titles ('Bone and Joint Outpt Records' rather than 'Clinic Note')

Existing Medical Record Committees will oversee future changes to titles and groupings. To date, we have not mapped this scheme to other proposed schemes [Brown 2001, Lober 2002] or external standards, but intend to do so.

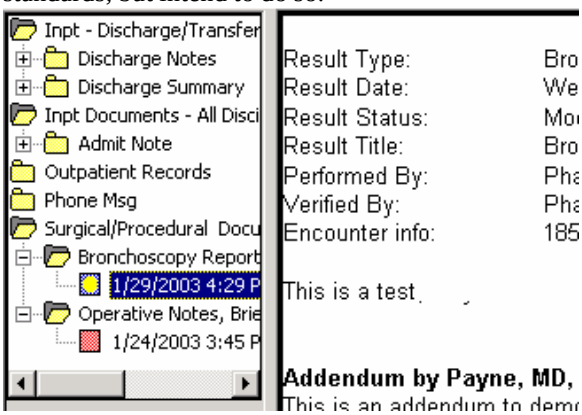

Figure. Sample showing subset of scheme as viewed through ORCA user interface.

CONCLUSIONS
Our classification scheme achieves all objectives, but trades off strength in some needs with compromise in others. Testing usability and speed will help us to refine it to achieve needs of a diverse set of clinicians who have not previously had easy access to such a large collection of medical record documents.

REFERENCE
Brown SH, Lincoln M, Hardenbrook S, et al. Derivation and evaluation of a document-naming nomenclature. JAMIA. 2001;8:379–390.

Lober WB, Tarczy-Hornoch P, Development of a multi-axial taxonomy for clinical documents, AMIA Fall Symposium Los Angeles, CA, November 2000.]

Contact: Thomas Payne (tpayne@u.washington.edu)